

## **AUGMENTED CATALYTIC HEAT EXCHANGER SYSTEM**

### **ABSTRACT OF THE DISCLOSURE**

5           Systems, apparatus, and methods for the catalytic removal of at least one pollutant from an air stream via a catalytic precooler arranged in series with at least one augmentative catalytic device. The augmentative catalytic device may be located upstream or downstream from the catalytic precooler. The augmentative catalytic device may be integrated with the catalytic precooler,  
10           thereby eliminating the need for a separate housing and minimizing weight. Alternatively, the augmentative catalytic device may be disposed within a separate housing, thereby facilitating access for maintenance and decreasing direct maintenance costs.